The 2001 Missouri School District Computing Census

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District Level Reports

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The 2001 Missouri School District Computing Census
Census of Technology Report

Back to 2001 Census

Introduction

The Missouri Census of Technology (COT) is designed to assess Missouri's continuing investment in K-12 education technologies and to help guide efforts ahead. It provides important data to share with state and national decision-makers to increase public awareness and advance public policy and support for education technology. It provides local school districts with data to help identify needs and develop strategies to facilitate school improvement processes.

The Census of Technology has been collected annually since 1997. Prior to the 2001 COT, the Department contracted the University of Missouri 's Office of Social and Economic Data Analysis (OSEDA) to administer the project. In 2001, the census was incorporated into the April cycle of the Department's online core data collection system. The census has two parts: a district census and a building census. Forms are to be completed based on the census date of March 1.

The District Census assesses the levels of planning and training for the district as a whole and concentrates on hardware, software and levels of connectivity for the administrative buildings and offices. Completed by district-level administrators and/or technology specialists, the census includes information for all Missouri school districts (524). The 2001 COT is the first to be completed by all of the districts; 504 districts completed the 2000 COT.

The Building Census assesses planning and training needs for individual school buildings and focuses on hardware and levels of Internet connectivity in computer labs, libraries and classrooms. Completed by building-level administrator or technology contacts, the census includes information for 2253 public schools, as compared to 2132 buildings in 2000. All K-12 attendance centers were required to complete the COT. Exempted buildings included preschools and juvenile centers.

This 2001 Missouri Census of Technology Report arranges the data for both the district and building levels, according to the following areas: technology planning, technology professional development, hardware and support, Internet connectivity / distance learning, technology usage, and technology funding. Where feasible and appropriate, this report presents and compares information from previous years. Aggregated responses for the district and building census forms are provided in Appendix A and B.

This report is a one of several documents that examine the use and effectiveness of educational technologies in Missouri. Other evaluative information can be found in the Missouri Education Technology Strategic Plan and annual status reports, eMINTS Program research studies, annual technology program reports, project descriptions and annual evaluation narratives, and a series of *Newsline* articles.

For additional information regarding the Census of Technology, contact the Instructional Technology section by telephone (573-751-8247) or email (instrtech@mail.dese.mo.gov).

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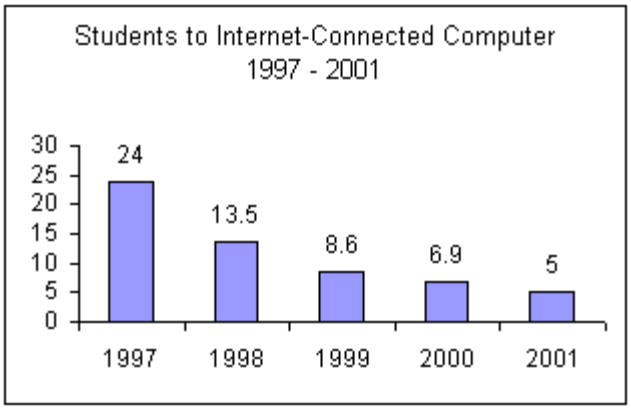
The 2001 Missouri School District Computing Census
Executive Summary

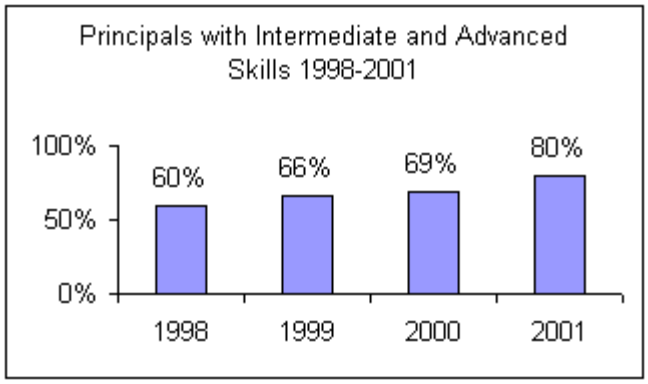
Back to 2001 Census

The 2001 Census of Technology shows that Missouri schools have come a long way in providing educational technologies to administrators, faculty, staff, and students. More classrooms are wired, more schools are connected, and students-to-computer ratios have decreased.



Of the 55,905 classrooms reported in Missouri public schools, 84% or 47,059 are wired for the Internet – up from 82% in 2000, 74% in 1999, and 56% in 1998. Of the 2253 school buildings that completed surveys, over 97% report connections to the Internet - up from 97% in 2000 and 95% in 1999. The overall number of students per computer is currently is 3.8; the number of students per Internet-capable computers is 4.2.

The proportion of teachers, technology support staff, and principals estimated to have intermediate and/or advanced technology skills have increased incrementally each year. The percent of principals estimated to have intermediate and/or advanced technology skills was 82% in 2001, up from 80% in 2000, 77% in 1999 and 65% in 1998. The percent of technology support staff with intermediate and/or advanced skills was estimated to be 97%, up from 83% in 2000, 75% in 1999, and 76% in 1998.



Below is a shortened list of some of the 2001 COT results.

Technology Planning

District Technology Plans

- 522 districts (99.7%) report having a technology plan
- 99% of the plans address hardware/peripherals and staff training; over 95% address equipment maintenance and requirement review; 92% cover software and internal connections; 82% curriculum integration; and 59% electrical wiring capacity
- 504 (96%) of the plans are state approved

- 97% of the districts indicate that teachers are involved in district decision making regarding technology acquisition and use; over 90% of the districts involve technology committee members, library media specialists and principals; 88% instructional technology directors; and at least 70% include school board members, chief financial officers, business partners, and superintendents
- 513 districts (98%) have a technology component in comprehensive school improvement plans

Building Technology Plans

- 1929 school buildings (86%) are included in district technology plans; 1879 buildings (84%) have their own technology plans
- Over 80% of the building technology plans address hardware/peripherals, staff training, and software; over 70% also address curriculum integration, internal connections, and equipment maintenance
- Over 80% of buildings report that the principal, teachers, and technology committee members are involved in developing, implementing, and evaluating the building's technology plan; 73% also include the library media specialist
- 1914 buildings (85%) report having their own comprehensive school improvement plan, with 75% of these plans having technology as a component of the CSIP

Technology Professional Development

Technology Staff

- 83% of districts have district staff responsible for technology maintenance / support; 78% are assisted by outside vendors
- 91% of buildings report that district staff are responsible for the technical training and/or support of the building staff; 68% also report the involvement of school certificated staff
- An average of 3.25 district staff FTE and .8 building-level staff FTE are responsible for all training and support
- Only 2% of schools estimate the number of staff responsible for technical maintenance / support will decrease, while 53% estimate the FTE will stay the same and 45% estimate an increase in FTE

Training Priorities

- 78% of districts rank curriculum integration and instructional integration as top technical assistance priorities, followed by networking (46%), and technology planning (45%)
- 68% of buildings rank instructional delivery / instructional technology as the top training priority for faculty, followed by curriculum development (60%), basic computer operations (53%), Internet applications (47%), word processing (45%), and evaluating Internet information (41%)
- 70% of buildings rank curriculum development as the top training priority for support staff, followed by technology planning (43%), LAN applications (36%), community awareness (34%), and network / wiring (33%)
- On average, schools schedule two days for professional development activities where teachers can learn or upgrade their technology skills

Technology Skills

- 83% administrative / district office staff have intermediate (65%) or advanced (18%) skills in the use of technology
- 86% of principals have intermediate (64%) or advanced (22%) skills
- 72% of teachers have intermediate (54%) or advanced (18%) skills
- 97% of technology support staff have intermediate (31%) or advanced (66%) skills
- 10% of districts and 17% of buildings require teachers to demonstrate technology skills for employment or continued employment with the school

Hardware and Support

District Hardware

- District administrative / office staffs use 17,523 computers, of which 89% are PCs or PC-compatible and 11% are

Apple/Mac machines

- Of the PC-compatible computers, 79% run on Windows, 20% on Novell, and 1% on Unix / Linux; 81% of the Apple/Mac machine operate on OS 7.x, 10% on OS 8.x, and 9% on OS 9.x or higher
- Districts planned to purchase an additional 1360 computers during the 2000-2001 school year, 1375 next year, and 2224 the following year
- In the next two years, districts estimate purchasing (for district-wide use) 43,667 computers, 13,868 computer upgrades, and 1367 interactive whiteboards and projectors

Building Hardware

- 237,115 computers are available to all building staffs; 204,187 (86%) of the computers are located in classrooms, computer labs, and libraries
- 75% of all computers and 78% of instructional computers are PC / PC-compatible
- Approximately 180,000 of the computers (80% PCs and 20% Macs) are multimedia equipped and with 91% of them located in instructional rooms
- Of the PC-compatible computers, 84% run on Windows (predominantly Windows 95 and 98) and 16% use Novell (mostly Novell 5.x); 66% of Apple computers operate on OS 7.x, 17% on OS 8.x and 17% on OS 9.x or higher
- Of the 61,407 classrooms, computer labs, and libraries, 61% have telephone access, 85% are wired for the Internet, 76% have multimedia-equipped computers, 55% have one or more multimedia computers with a direct Internet connection, and 11% have a teacher workstation that includes an Internet-connected computer, printer, and projection device
- 91% (163,892) of the 179,509 Internet-connected computers are located in instructional rooms

Building Support

- 91% of buildings indicate that district staffs are responsible for technical maintenance / support; while 62% also use outside vendors, and 54% involve school certificated staff
- 3992 building-level FTE are responsible for technical support, averaging 1.78 per building

Internet Connectivity – Distance Learning

Internet Connectivity

- 96% of the district administrative buildings/offices have a direct link to the Internet, with T1 or better bandwidth capacity in over 90% of the offices
- 97% (1773) buildings have access to the Internet, with 1303 of the these buildings (73%) having a direct link

District and Building Networking

- 503 districts (97%) have a local area network (LAN), with Novell as the predominant server in use, followed by Windows NT, and Apple Share
- 1619 buildings (72%) have a local area network (LAN)
- 297 districts (57%) connect district offices to other school buildings by a wide area network (WAN) -- 2217 school buildings are connected to district WANs
- 1332 buildings (60%) are connected to a district-wide area network (WAN)
- 209 buildings participate in distance learning through interactive television (I-TV), 158 via satellite, and 135 through desktop (Internet-based) technologies

Internet Usage Policies

- 82% of districts require parent signatures before students can access the Internet: 80% of elementary, 87% of middle school / junior high, and 78% of high school parents
- 1254 buildings (56%) require parent signatures before students can access the Internet
- Approximately 59% of students have signed Internet acceptable use policies
- 1005 buildings (45%) use filtering software on Internet-connected computers

Technology Use

District Technologies

- 463 districts (89%) incorporate technology into curriculum guides
- 19% of districts have student technology proficiency requirements
- 69% of districts post school calendars on district websites and 65% include district staff; 58% have school members and 51% post annual reports of school district data -- only 34% post student work and 16% post district curriculum
- Districts employ an average of 3.49 FTE responsible for training and supporting teachers to integrate technology: 1.54 district staff and 1.95 school-level staff
- Districts provide email accounts to 8155 administrators, 61,370 teachers, and 42,662 students
- Districts estimate that 84% of 6th graders are able to perform basic computer operations
- 73% of districts have installed their own email servers, 65% have web servers, 58% have firewalls, and 44% have proxy servers

Building Technologies

- Buildings report the following routine use of technology, by application and user type

Application	Principals	Teachers	Students
Software	34%	59%	62%
E-mail	74%	65%	11%
World Wide Web	71%	67%	52%
EBSCO host database	24%	27%	22%
Electronic encyclopedia	22%	36%	38%

- Buildings estimate the following routine uses of technology, by function and user type

Function	Principals	Teachers	Students
Computer-generated presentations	31%	29%	23%
Writing assignments	56%	60%	52%
Research information collection	58%	56%	40%
Communicate with parents	48%	30%	7%
Lesson plan preparation	13%	45%	N/A
Spreadsheet/database (student records)	60%	46%	N/A
Track student performance	56%	48%	N/A
Communicate with DESE staff	52%	18%	N/A

Instructional delivery/presentation	21%	29%	N/A

- 65% of buildings indicate the technology coordinator is responsible for the leadership and support of teachers in integrating technology, followed by school administrators (57%), and library media specialists (38%)
- Buildings estimate that 33% of the teaching staffs are able to fully integrate technology into the curriculum

Technology Funding

District Technology Spending

- For 2000-2001, districts projected technology expenditures of $ 69,015,848
- Districts project spending $64,473,200 next fiscal year, with less money being spent on hardware and software and more funds spent on professional development, connectivity, and networking
- 368 districts (71%) applied for e-rate discounts for FY01 expenditures, estimating $11 million in savings (median was $10,000)
- 11% of districts purchased technology products or services off the Missouri prime vendor contract

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District Census Report

Back to 2001 Census

All 524 districts, for the first time, completed the Census of Technology in 2001. This section of the Census of Technology Report analyzes the 2001 data, compares 2001 data with data collected in previous years, and notes interesting trends or anomalies. Predominantly, the COT data indicate continued improvement over the previous year(s).

Technology Planning

A school district's long-range technology plan should provide a road map that will help the district implement strategies that promote the district's mission, advance its comprehensive school improvement plan, and improve teaching and learning. Items 1 and 3 asked if districts have technology plans and, if so, whether they are state approved or aligned with local school improvement plans (CSIP). Table 1 indicates a steady increase in each area. Note that only two districts reported not having a plan in 2001.

Table 1

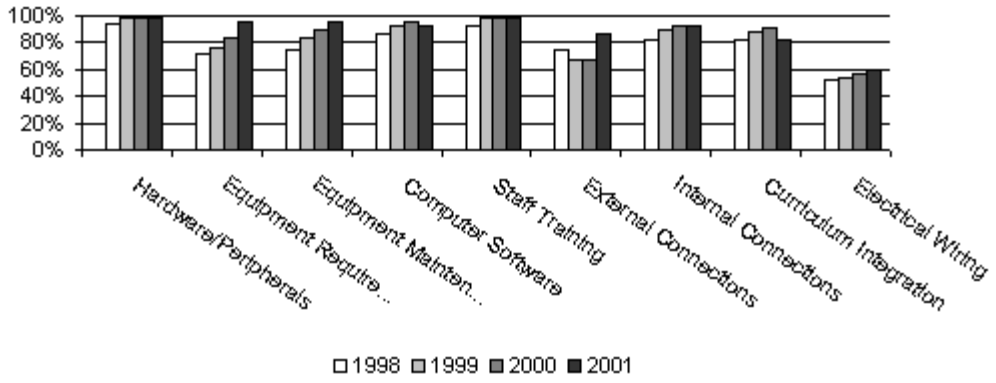
District Technology Plans

	1997	1998	1999	2000	2001
Districts With a Technology Plan	94%	93%	96%	99%	99.7%
Districts with State-approved Plan	N/a	71%	82%	89%	96.2%
Districts with Technology in CSIP	N/a	92%	95%	96%	97.9%

Early district technology plans dealt mostly with hardware and equipment and did little to address integration, student learning, or technology professional development. Item 1 asked what was addressed by local technology plans. COT data and recent state reviews of technology plans indicate that district plans have become more technical while also moving beyond access issues to address student learning and teacher development. Figure 2 illustrates this movement, except curriculum integration, which took a small, surprising downturn.

Figure 2

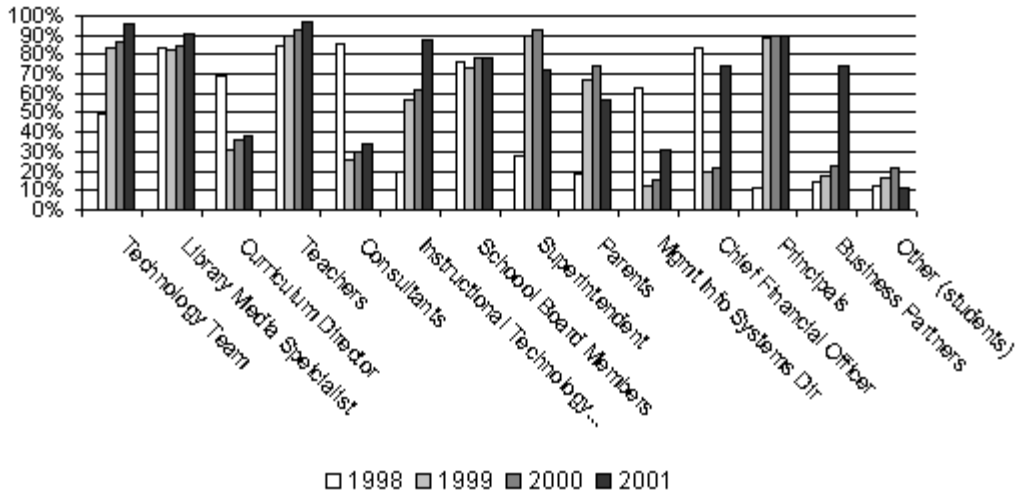
Percentage of Districts with Specific Technology Plan Components



Item 2 asked districts to indicate who makes technology-related decisions for the district, in terms of technology acquisition and use. Figure 3 indicates a movement toward giving more decision-making responsibilities to instructional staff, less to chief financial officers and consultants, and involving a wider spectrum of stakeholders.

Figure 3

District Decision Makers for Technology Acquisition and Use



Item 4 asked whether districts partner with business or higher education to help support district technology initiatives. While the number of districts that reported having a technology partner in 2001 was only 165 (31%), this is a 60% increase from the 103 districts that reported having a technology partner in 1998. Table 4 depicts the slow, steady progress in developing partnerships.

Table 4

Districts With a Technology Business or Higher Education Partner

	1998	1999	2000	2001

Percent Districts with a Partner	22%	27%	29%	31%

Technology Professional Development

Four items on the District-level COT addressed training issues. Item 5 asked who is responsible for the technical maintenance and support in the district. Item 6 asked districts to prioritize the training needs of those responsible. Items 7 and 8 address technology skills: 7 asked whether teachers are required to demonstrate technology skills for employment or continued employment, and 8 asked about the technology skills level of district administrators.

Table 5 indicates that districts are engaging more people to handle technical maintenance and/or support of hardware in the districts. As more technology is acquired and more educators are using the technologies, it creates a need for greater technical support. Over 60% of the districts involve district staff, certified staff and outside vendors to help with equipment maintenance and support.

Table 5

Percentage of Districts Indicating Persons Responsible for District Technical Support

Persons Responsible	1998	1999	2000	2001
District Staff	70%	73%	77%	83%
Outside Vendors	65%	69%	72%	78%
School Certified Staff	44%	51%	56%	61%
School Classified Staff	15%	17%	20%	27%
Contractors	22%	22%	24%	27%
Students	10%	13%	17%	21%
Parents	3%	5%	4%	4%
Regional Centers / RPDCs	2%	3%	3%	6%

Table 6 lists the training priorities for the persons responsible for equipment maintenance and support. Curriculum and instruction integration have consistently been the top priorities for the majority of districts. Areas indicating an increased emphasis since 1998 include technology planning and community awareness. Budget planning and networking priorities have remained steady, while procurement dropped slightly in 2001.

Table 6

Percentage of Districts Indicating Top Training Priorities

Training Type	1998	1999	2000	2001
Instructional Integration	57%	73%	78%	78%
Curriculum Integration	65%	72%	77%	78%
Networking	47%	45%	43%	46%
Technology Planning	31%	44%	44%	45%
Information Systems	17%	33%	35%	33%
Basic Operations	N/a	33%	31%	30%

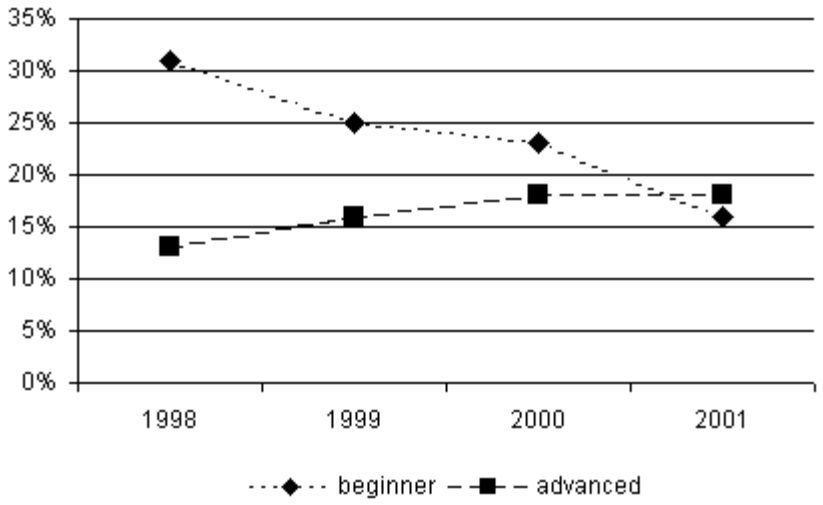
Procurement	28%	24%	24%	25%
Budget Planning	20%	20%	20%	22%
Community Awareness	17%	19%	20%	20%

Items 7 and 8 dealt with technology standards for district administrators. In 1998, approximately 7% of districts required teachers to demonstrate technology skills for hiring and continued employment decisions. The percent rose to 8% in 2000 and 10% in 2001.

In 1998, approximately 67% of district administrators were estimated to have intermediate and advance technology skills. By 2001, the percent increased to 81%. The contrast between the decreasing percent of “beginners” and the increasing percent of “advanced” is illustrated in Figure 7.

Figure 7

Percent Administrators with Beginner and Advanced Technology Skills
1998 - 2001



Hardware and Support

Items 9 through 13 asked district administrators to estimate the number of persons responsible for technical support, list the kinds of computers located in the administrative offices, and estimate the number of computers expected to be purchased in coming years – for both administrative offices and school buildings.

Since 1999, districts have been consistently reporting an average of 2 district-level staff and a little over 2 building-level staff that are responsible for hardware maintenance and support. However, these averages level out the number of districts with little or no technology staffs as well as districts with one or more technology staff person in each building. In 2001, perhaps because of the inclusion of all districts for the first time, the numbers dropped to 1.7 district FTE and 1.3 school FTE. It is also noted that some districts have reclassified some technology specialists (technicians) as instructional technology specialists (teachers).

Table 8 notes an annual increase the overall numbers of computers and kinds of computers

housed in administrative offices. In part, the increase shown for 2001 is affected by the greater number of respondents each year. The proportion of high-end machines also increased each year, as did the proportion of PCs. While the number of Apple/Mac machines has remained fairly steady, the proportion of all machines has dropped. Windows is the predominant operating system for PC/PC-compatible machines, followed by Novell. Of the Apple/Mac computers, 88% are running OS 7.xx and 18%, OS 8.0 or higher.

Table 8

Administrative Office Hardware

	1998	1999	2000	2001
Total Number of Personal Computers	8,227	11,558	14,788	17,523
Number of PC/PC-Compatible Machines	6,371	9,826	12,944	15,646
Number of Apple/Mac Machines	1,856	1,732	1,844	1,877
Percent PC-Compatible 586/Pentium and up	59%	76%	88%	94%
Percent Apple/Mac 68040 and higher	55%	72%	81%	82%
Percent PC-Compatible	77%	85%	88%	89%
Percent Apple/Mac	23%	15%	12%	11%

District estimates of how many computers will be purchased in coming years, continues the trends noted above. Districts expect to purchase increasing numbers of machines for the administrative offices, as well as computers, interactive whiteboards, and whiteboard projectors for the school buildings.

Internet Connectivity and Distance Learning

Items 14 through 18 ask about the administrative office's capacity to interact with others through Internet, networking, and distance learning technologies. Table 9 shows the steady increase in the percentage of administrative offices connected to the Internet, a local area network (LAN), a wide area network (WAN), and that are equipped for two-way videoconferencing.

Table 9

Administrative Office Connectivity/Networking

	1998	1999	2000	2001
Percent District Offices with Dedicated Internet Connection	68%	85%	92%	96%
Percent District Offices Connected to Local Area Network	77%	82%	86%	90%
Percent Offices Connected with District Buildings by a Wide Area Network	34%	46%	53%	57%
Percent District Offices Equipped for Two-way Interactive Audio/Video Communications	5%	7%	7%	8%
Number District Offices with Full Motion Video	12	26	23	28
Number District Offices with Compressed Video	7	12	13	15
Number District Offices with One-way Video With Two-Way Audio	6	39	39	50

Number of District Offices with Two-way Interactive Video and Audio	10	38	55	69
Percent Districts that Require Parent Signatures for Children's Internet Access	49%	68%	76%	82%

Technology Usage

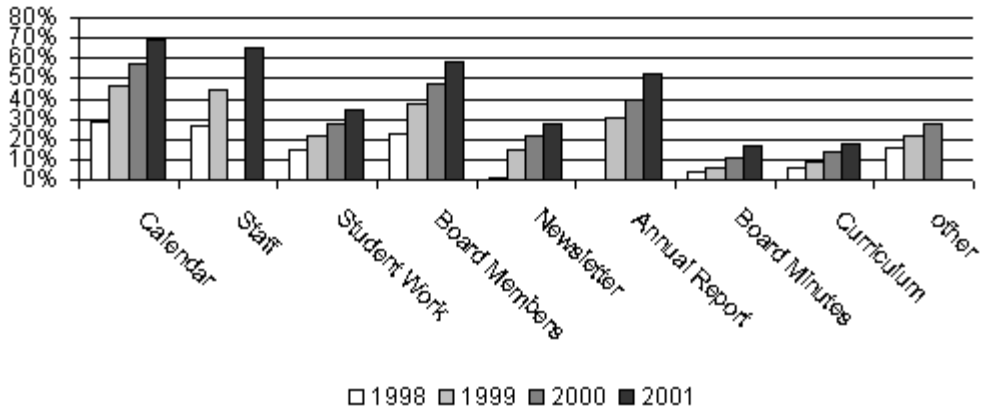
Items 19 through 28 ask about district-wide technology use. Item 19 asked districts whether technology is incorporated in district curriculum guides and academic standards. In 2001, 88% of the districts responded that technology was addressed in curriculum guides, as compared to 81% in 2000, 73% in 1999, and 63% in 1998. In 2001, districts stated that 65% of their core content areas had technology incorporated.

Item 20 asked if districts had technology proficiency requirements for students to pass to the next level. In 2001, 19% of the districts indicated they had such a requirement, which is consistent with the three previous years that ranged from 16 -18%.

Figure 10 indicates what information about the districts can be accessed from district web sites. Every information category steadily increased over the last four years. Increasingly, more districts are maintaining their own web sites and posting a higher quantity and quality of information.

Figure 10

Percent Districts with Information Accessible via the Internet



Item 22 asked districts to estimate the staff responsible for the training and support of teachers in integrating technology into curriculum and instruction. The 2001 data are noticeably lower than the last two years. In the past, districts averaged approximately two district-level staff and six to seven building-level staff. This year, districts estimated 1.53 district and 1.95 building staff. Besides the addition of new respondents, another explanation is that districts are taking a more critical look at technology integration. There was a tendency for districts to add technicians and not isolate instructional technology staff.

The next item indicated that 8,155 administrators, 61.370 teachers, and 42,662 students were provided email accounts in 2001. Except for students, the 2001 data are much higher than in previous years. The 2000 COT data indicated email accounts for 7,533

administrators, 55,218 teachers, and 51,789 students. In 1999, 6,400 administrator, 45,370 teacher, and 50,908 student email accounts were provided.

Figure 11 shows a steady increase in the percent of 6th grade students estimated to be computer literate. In this case computer literate means the student is able to perform basic computer operations.

Figure 11

Percent Districts with Information Accessible via the Internet

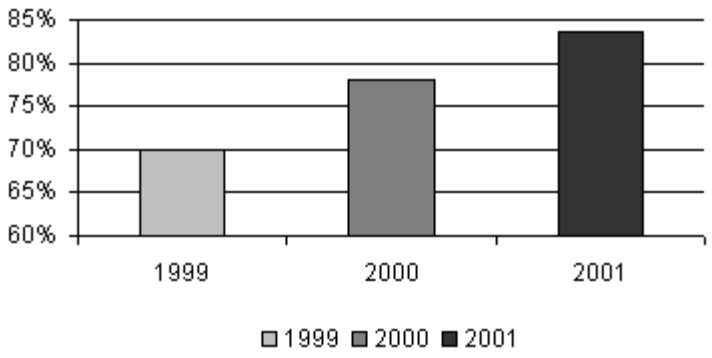


Table 12 indicates a steady increase in the percentage of districts installing their own email, web, and proxy servers and firewalls. In 2001, Mercury was the predominant email server, MS FrontPage and IIS the most used web server, and Border Manager the primary proxy server and firewall.

Table 12

Percent Districts Installing Own Servers

	1999	2000	2001
Email Server	60%	67%	73%
Web Server	52%	59%	65%
Proxy Server	28%	36%	43%
Firewall	39%	48%	57%

Technology Funding

For 2000-2001, districts projected technology expenditures of $ 69,015,848, as follows:

$43,835,991 – Computer and peripheral hardware (64%)
$ 8,740,757 – Server purchase/support (12%)
$ 6,481,647 – Instructional software (9%)
$ 4,379,409 – Technology-related professional development (6%)
$ 2,481,296 – Distance Learning - cable, satellite, I-TV (4%)
$ 1,509,878 – Internet charges (2%)
$ 1,586,870 – Other/miscellaneous (2%)

For the past four years, estimates of district technology expenditures have hovered between $60 and $70 million. In 2001, districts estimated spending $63,833,896 in FY00, $69,015,848 in FY01, and $64,473,322 in FY02. Note that this year's estimate for FY01 expenditures exceeds last year's projection for FY01 by almost $9 million. The 2001 estimates include higher expenditures in every category, with the biggest differences relating to hardware ($4.7 million), followed by Internet charges ($976,000) software ($957,000 million), server support ($700,000), distance learning ($170,000), and professional development ($80,000).

The FY01 technology budget averages about $131,710 per district. However, the median district estimates spending approximately $44,000. The typical (median) district approximates spending $31,500 for hardware, $4,500 on software, $3,000 for professional development and for server support, $1,500 for Internet, and $450 for distance learning.

The last questions on the district census form ask whether districts participate in the e-rate program and purchase products or services from the state's prime vendor contract. The percent of districts filing e-rate applications has increased from 60% in 1999 to 70% in 2001. [Note that 512 districts are represented by a statewide e-rate application that has resulted in lower district fees for the DESE-MOREnet Technology Network Program.] The percent of districts benefiting from the state vendor contract has increased from 7% to 11%.

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The 2001 Missouri School District Computing Census
Building Census Report

Back to 2001 Census

The 2001 Census of Technology collected data from 2253 school buildings, as compared to 2132 building in 2000. Generally, the 2001 building-level data continue the improvement trends noted over the years; however, some interesting dips were also noted. The consistency in the downward changes suggests that the 2001 results were likely affected by the data collected from the 121 buildings that completed reports for the first time in 2001. It suggests that these buildings have less involvement and experience in formalizing plans for the acquisition and use of education technology.

Technology Planning

A school building long-range technology plan, like a district plan, should provide a road map to help the school implement strategies that promote the district's mission, advance district and school improvement plans, and improve the teaching and learning occurring in the building. Items 1 and 3 asked if buildings had a technology and/or a comprehensive school improvement plan (CSIP). Question 1 also asked who was involved in developing the building technology plan, while question 2 dealt with who was involved in implementing and evaluating the plan. Question 4 pertained to school partners in supporting technology.

Almost every statistic related to technology planning showed a slight decrease in 2001, yet the overall trends held true. More plans address student learning and staff development. More instructional staff and a greater variety of staff are involved in the planning, implementation, and evaluation of the school building technology plan.

Table 1 indicates the percentage of school buildings that have technology plans and school improvement plans, and the percentage of building plans included in district plans.

Table 1

Building Technology Plans				
	1998	1999	2000	2001
Building Has a Technology Plan	69%	83%	86%	84%
Building Plan is Part of the District Technology Plan	64%	96%	97%	86%
Building Has a CSIP	69%	99%	99%	75%

Table 2 lists the technology components addressed by building technology plans, in rank order. While the percentages are consistently lower this year, the overall ranking of the components hasn't changed. In addition to addressing the acquisition of technology,

higher rates of technology plans are also addressing student learning and technology staff development.

Table 2

Percentage of Buildings with Specific Technology Plan Components

Percentage	Technology Component
83%	Hardware and Peripherals
82%	Staff Training
81%	Computer Software
78%	Curriculum Integration
73%	Equipment Maintenance
73%	Internal Connections
65%	Review Requirements
48%	External Connections
47%	Electrical Wiring / Capacity
8%	Assistive Technology

Table 3 indicates who was involved in making 2001 technology-related decisions at the building level in terms of technology acquisition and implementation. As mentioned above, while the percentages are lower this year, buildings increasingly involve more instructional staff in decisions related to education technology. A wider representative body is also noted. Early COT data indicated principals and teachers mainly made these decisions, with little or no representation of the student body, parents, or the community. While principals and teachers remain highly involved in the decision-making, the percentage of buildings that also include the following has doubled since 1998: instructional technology staff, curriculum consultants, and business representatives. Increasing by 50 to 75% are groups that include technology team members, library media specialists, parents, teachers, and principals.

Table 3

Those Involved in Developing, Implementing and Evaluating Building Technology Plans

Percentage	Representative / Group
85%	Principal
85%	Teachers
81%	Technology Team
75%	Library Media Specialist
61%	Parents
51%	Instructional Technology Contact
32%	Business Representatives
25%	Curriculum Staff / Consultants
5%	Students

Item 4 asked about building partnerships with business or higher education that help support district technology initiatives. While the number of buildings that reported having a

technology partner in 2001 was only 659 (29%), this is markedly higher than the 6% in 1998. Table 4 indicates the type and frequency of building partners reported for 2001.

Table 4

Buildings with a Technology Business or Higher Education Partner

Partner Type	Number of Buildings
College/University	418
Business – Technology Related	190
Business – Other	136
Public Entities	42

Technology Professional Development

Nine items on the Building-level COT addressed training issues. Questions addressed the kind and number of staff responsible for staff development, priority training needs for building technical and instructional staff, the kinds and hours of training available to staff, and the technical skills of staff.

Items 5 and 6 asked who is responsible for the technical training and support of building staff and the number of staff available. Table 5 indicates those responsible for technical training, 1998 through 2001. The 2001 data follow the trend of relying more on district staff and less on outside vendors. The average district-level FTE rose from 2.6 in 2000 to over 3 people, while the number of building-level staff dropped slightly, from 1 to .8 of a person.

Table 5

Percentage of Buildings Indicating Persons Responsible for Technical Support

Persons Responsible	1998	1999	2000	2001
District Staff	77%	82%	88%	91%
Outside Vendors	53%	32%	39%	48%
School Certificated Staff	48%	51%	63%	68%
School Classified Staff	24%	24%	29%	33%
Contractors	17%	11%	15%	16%
Students	7%	5%	6%	7%
Parents	3%	3%	3%	4%
Regional Centers / RPDCs	2%	12%	14%	19%

Figure 6 shows the shifts in training priorities for the school building's faculty. As more staff become familiar with basic computer operations, an increasing emphasis is being placed on training that addresses how to evaluate Internet information and deliver instruction with instructional technology.

Figure 6

Educational Technology Training Priorities

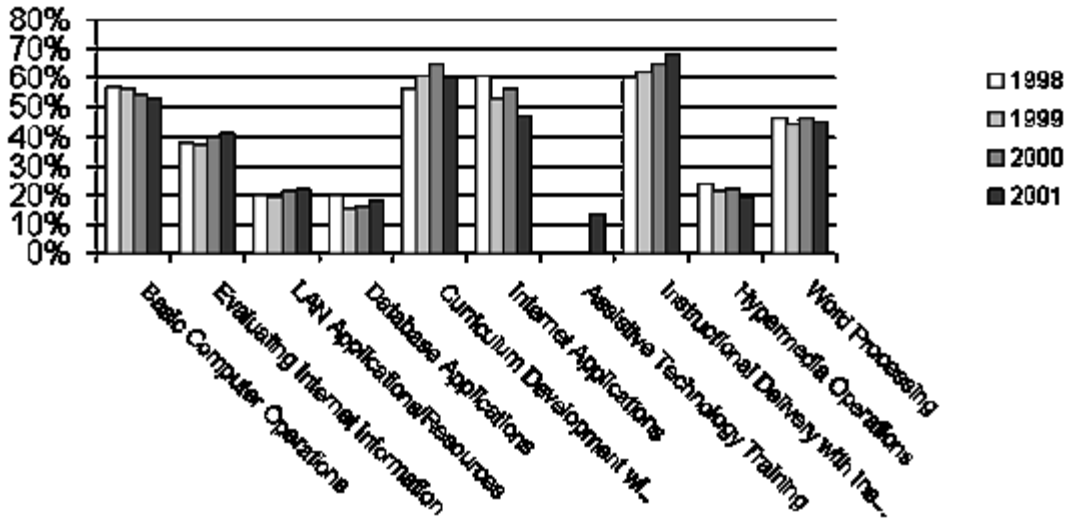
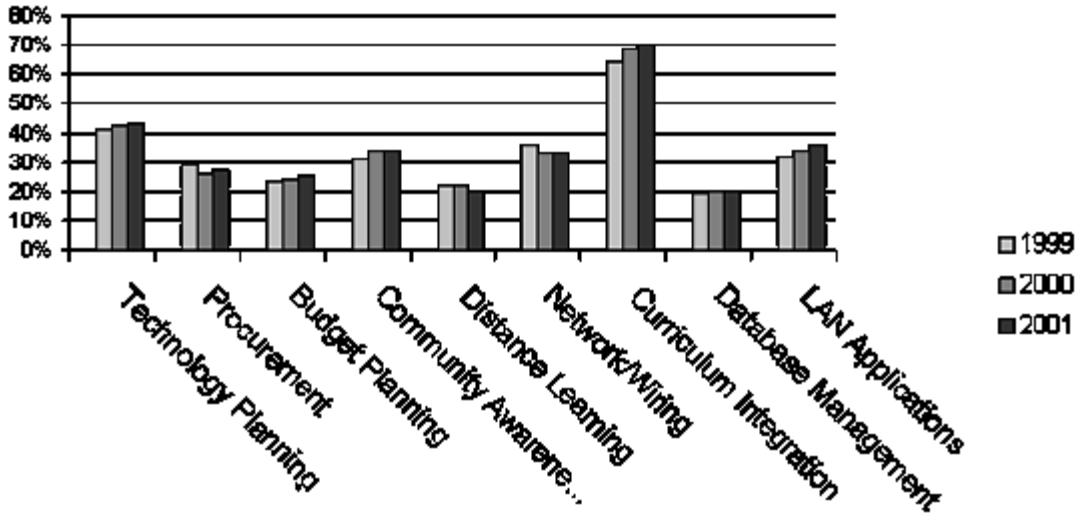


Figure 7 shows a shift in priority training needs for the building's technical support staff, too.
Training is changing from an emphasis on basic applications to curriculum integration and more advanced LAN applications.

Figure 7

Technical Support Staff Training Priorities



Question 9 asked buildings to report the number of technology professional development hours offered to building staff and faculty. The number of hours of training, per training type and trainee, reported in 2001 is consistent with 2000 data, but slightly higher than 1999 data. Table 8 compares 2001 data against the 1999 data.

Table 8

Educational Technology Training Hours Offered

	1999		2001	
Training Type / Hours	Administrators	Teachers	Administrators	Teachers
Introduction to operations	4.2	6.3	4.08	6.48
Using software applications	9.9	16.3	10.65	15.76
Using Internet resources	5.4	9.1	5.74	9.75
Curriculum Integration	4.4	8.1	5.07	9.52
Teaching Applications	3.3	7.9	3.96	8.34
Using Assistive Devices	N/a	N/a	0.24	0.62

Items 10 and 11 asked about teacher technology standards and existing skill levels. The number of buildings requiring technology skills for employment or continued employment rose from 7% in 1998 to 17% in 2001. Overall, the skill levels of principals, teachers, and technology support staff have increased over the past 4 years. Beginner levels for all three groups have decreased. Figure 9 illustrates the increases at the advanced level. Figure 10 shows the percentage of staff at the advanced level combined with those at the intermediate level.

Figure 9

Estimated Percent of Faculty/Staff with Advanced Skills

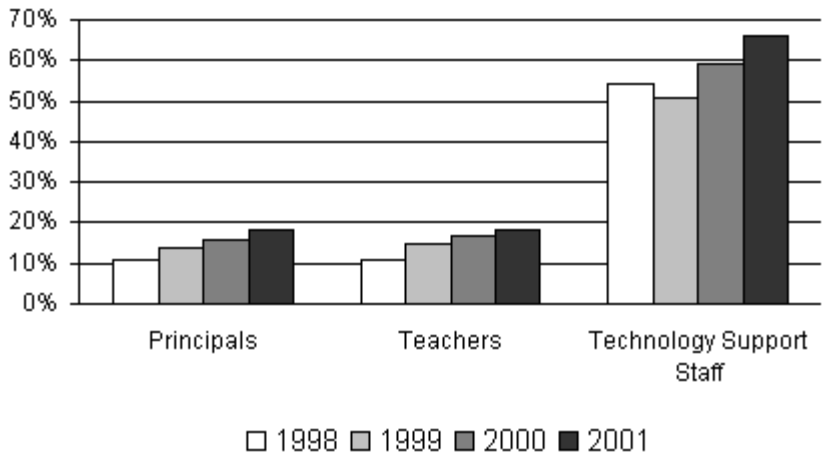


Figure 10

Estimated Percent of Faculty/Staff with Intermediate and Advanced Skills

The final training questions asked buildings to indicate the number of training days offered for technology related issues, and whether or not the offerings were expected to increase, decrease, or stay the same the next year. The average number of technology training days indicated in 2001 was 2.8 days, compared to the 3.5 days in 2000 and 1999, and 3 days in 1998. While in the past over half of the buildings expected an increase in the future number of days being offered in future years, over half of the 2001 respondents expected next year's training to remain the same.

Hardware and Support

In the Hardware and Support section of the Census of Technology, school buildings provided information for seven different items that ranged from responsibility for school building hardware to types and locations of the technologies available.

Table 11 shows responses to Item 14 about who is responsible for the technical maintenance and/or support of hardware in your school building. Over 90% of buildings rely on district staff.

Table 11

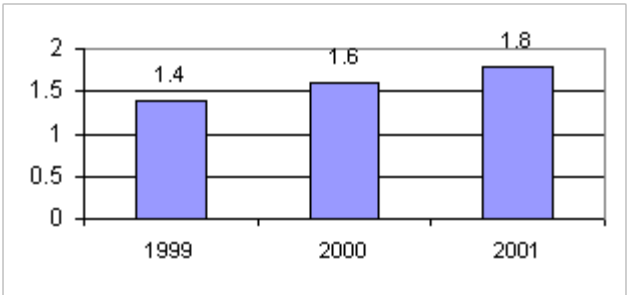
Percent Buildings with Specific Persons Responsible for Technical Support

	1998	1999	2000	2001
District Staff	70	73	77	91
Outside Vendors	65	69	72	62
School Certified Staff	44	51	56	54
School Classified Staff	15	17	20	31
Contractors	22	22	24	25
Students	10	13	17	11
Parents/Community Members	3	5	4	3
Regional Centers/ RPDCs	2	3	3	3

Figure 12 indicates the number of FTE responsible for technical maintenance and support in the building. While the steady increase in the number is encouraging, averages do not tell how many buildings have little or no support as compared to buildings with great support.

Figure 12

Building Technical Support FTE



Items 6 through 19 and 21 asked buildings to identify the number of computers by type and location, operating systems, and capacity. The total number of computers in the 2253 buildings in March 2001 was 237,115. Of the total number of computers, 86% are located in instructional rooms (classrooms, libraries, and labs), 81% run at Pentium/Pentium equivalent speeds or higher, and 75% of them being PC Compatible machines. [Computers with Pentium speeds is the standard used to identify Internet-capable computers.] In the past four years school buildings have purchased a considerable number of computers. Schools need an ample supply of modern equipment to provide with ready access to software and online information whenever appropriate, and not have to wait for scheduled periods of lab time.

Table 13 indicates the total numbers of computers, percent computers residing in all instructional rooms, percent located in classrooms, percent with Pentium speeds or higher, and percent PC compatible, The number of computers reported in 2001 represents an 80% increase over the 1998 total. With the influx of new computers, the percentage of Internet-capable (high speed) computers has increased from 44% to 85%. Except for the slight drop in 2001, over 90% of building-level computers are located in computer labs, classrooms, and library/media centers. The most encouraging statistic pertains to the increased percentage of computers located in the classroom.

Table 13

Numbers, Types, and Location of School Building Computers *

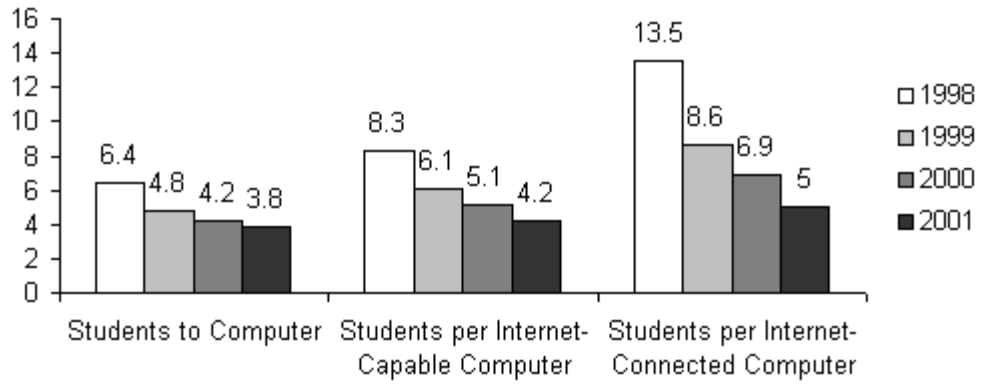
	1998	1999	2000	2001
Total Number of Computers	131,777	176,150	206,864	237,115
Percent Computers with Pentium+ Speeds	44%	62%	72%	86%
Percent Computers Located in Instructional Rooms	90%	92%	91%	86%
Percent Computers in Classrooms	46%	48%	49%	50%
Percent Computers PC Compatible	27%	31%	28%	25%

* Data prior to 2001 are adjusted, to estimate the entire population.

Figure 14 indicates the ratios of students to computer, 1998 - 2001. There has been a steady decline in the numbers of students per computers, overall; per high-speed (Internet-capable) computer; and per Internet-connected computer. The greatest decline relates to Internet-connected computers. More and more buildings and computers are connected to the Internet, due in part by the Technology Network Project and school networking efforts.

Figure 14

Student-to-Computer Ratios



Items 18 and 19 indicate that PC-compatible machines represent 80% of all multimedia equipped computers in the building, and that schools continue to project purchasing additional computers in coming years at a steady rate.

Table 15, derived from Item 21 data, identifies a variety of technologies available in buildings, by type and location. The table indicates that classrooms lag behind other rooms with respect to telephone and Internet access and complete workstations (Internet-connected computer, printer, and projection device).

Table 15

Status of Specific School-Building Technologies

	Computer Lab	Instructional Room	Library/ Media Center	Principal Office
Total Number of Rooms	3301	55905	2201	4877
Percent with Telephone Access	72%	60%	88%	94%
Percent Wired for Internet Access	93%	84%	92%	87%
Percent with Multimedia Computer(s)	91%	75%	87%	81%
Percent with Internet-connected Computer	71%	53%	66%	55%
Percent with Complete Teacher Workstation	25%	10%	14%	4%

Item 22 asks schools to report the numbers of a variety of peripheral units/systems located in the 2253 school buildings, 1998-2001. Table 16 lists these technologies in rank order according to 2001 data. There is a marked increase for each technology item since 1998, except for the number of satellite receivers reported in 2001. The drop from over 1000 receivers to fewer than 500 likely is a result of significant cut in VIDEO Program funds and the fact that many of the receivers are 7-12 years old and not capable of receiving digital

programming.

Table 16

Building Technology Peripheral Units / Systems

	1998	1999	2000	2001
Inkjet Printers	16446	27057	33786	43,326
TV Monitors	24722	33210	38475	41,683
VCR Units	20756	29074	32608	37,701
CD-ROM Network	10116	16814	21651	35,573
Total Color Printers	11752	21510	28621	34,293
Graphic Calculators	10491	17201	20334	27,279
Scientific Calculators	10194	17463	21919	24,385
Cable TV	10094	16323	18704	13,991
Dot Matrix Printers	13889	16437	15031	12,404
Laser Printers	5137	7914	10251	12,288
Computer Projection Devices	2911	4850	5750	7,773
Alpha Smart/Laptop Processors	2243	3961	4979	6,311
Laserdisc Players/DVD	2971	3885	5026	5,680
Scanners/Digitizers	1950	3305	4332	5,133
Digital Cameras	1187	2070	3025	3,940
Assistive/Adaptive Devices	378	1005	1190	2,978
Fax Machines	1380	1982	2165	2,351
Probeware	793	861	1102	1,405
Interactive Whiteboards	N/a	174	462	1,027
Interactive Television	434	554	577	689
Satellite Receiver	880	1117	1171	454
Video Distribution Systems	N/a	N/a	N/a	311
Personal Digital Assistants	N/a	N/a	N/a	250

Internet Connectivity / Distance Learning

This section of the COT deals with interconnectivity issues. Items 23 and 24 address building access to the Internet, the kinds of connectivity and bandwidths; 25-26 address dial-up accounts; 28-29, networking; 30-31, distance learning technologies; and, 32-34, policies regarding the use of such technologies. For a majority of the items, the 2001 data are lower than previously reported – likely a result of the additional buildings that completed the 2001 COT. As noted before, it is apparent that many of these buildings lag behind the buildings that have reported in the past. Consistently over time, MOREnet was listed as the major Internet provider.

In 2001, 1773 buildings (79%) indicated having access to the Internet, with 94% of these connected through MOREnet, and 73% having a direct (dedicated) connection). These are the lowest figures noted over past four years. 90% of the buildings had Internet in 1998, 95% in 1999, and 97% in 2000. 73% of the buildings had a direct link, as compared to 40% in 1997, 71% in 1998, 83% in 1999, and 89% in 2000. Nine percent of the buildings still rely on dial-up links. On a brighter side, the bandwidth capacity has increased annually. Nearly 1500 buildings reported having T1 or higher capacity, as compared to 22% in 2000 and 24% in 1999.

The 1619 buildings (72%) with a LAN, averaged 68.21 computers and 1.2 servers. The

predominant operating system was Novell. In 2000, buildings averaged 1.4 servers and 77.9 computers per server, and Novell operated nearly two-thirds of the servers. 1,332 buildings (59%) were connected to a WAN, as compared to 67% last year.

Nearly 300 buildings participate in distance learning, and another 319 indicate plans to participate within the next two years. Table 17 depicts the technologies in current use or to be used, and the number of buildings that use them, to access courses originating from a distant site.

Table 17

Building Distance Learning Technologies

	Number Used 2001	Buildings Future Plans
Cable Television	262	-
Interactive Television (I-TV)	209	54
Satellite	158	-
Internet-based Videoconferencing	135	132
Compressed Video	15	8
Videotape	5	-
Web	2	7

Regarding the safety in using the Internet, 56% of the 2253 buildings reported that they require parent signatures before students can access the Internet, that 59% of the student body is required to sign Internet acceptable use policies (AUP0, and 45% use filtering hardware or software. These figures are comparable to data from previous years, taking into account the lower smaller percentage of buildings with Internet connectivity. Those buildings using filters, report that all Internet-connected computers have filtering. Buildings use Cyber Patrol, Screen Door, Web Sense, X-Stop, Sonic Wall, Surf Watch and Border Manager.

Technology Usage

The remaining COT items (35- 41) address how buildings use the education technologies available. Items ask about student, teacher, and principal use, by technology type and function, who helps with technology integration, and how the building uses technology to inform and communicate with others.

While the 2001 estimates of routine use of different technologies by principals, teachers, and students are lower than last year's estimates, the percentages and trends hold true when taking into the access status of all 2001 COT respondents. The percentage of principals routinely using educational software has decreased over the years, while the percentages increased for teachers and students prior to 2001. Routine use of email, electronic encyclopedia/online resources, and the Web has remained consistent.

The 2001 data show an increase in the percentages of teachers that routinely use technology for the following functions: spreadsheets/databases (student records), track student performance, and instructional delivery and presentations. Percentages are comparable to last year regarding the use of technology by teachers and students for computer-generated presentations, writing assignment, and research information collection. Also, about the same proportion of teachers is using technology for lesson plan development.

Little or no change was reported regarding those responsible for providing leadership and to help teachers integrate technology into curriculum and instruction. Generally, technology coordinators, school administrators, and library media specialists are responsible.

Table 18

Building Staff Responsible for Technology Integration in 2001	
Technology Coordinator	65%
School Administrator	57%
Library/Media Specialist	37%
RPDC	9%
Outside Vendor	8%

Item 38 was added to the 2001. Buildings, on average, estimate that one-third of the teaching staff is able to fully integrate technology. This statistic supports earlier data that indicate technology integration as a high staff development priority.

Items 39 and 41 address building uses of the web, to provide information to others and to access Department of Elementary and Secondary Education information. Keeping in mind the access issue, again, the data for these two items are comparable to data reported the last two years.

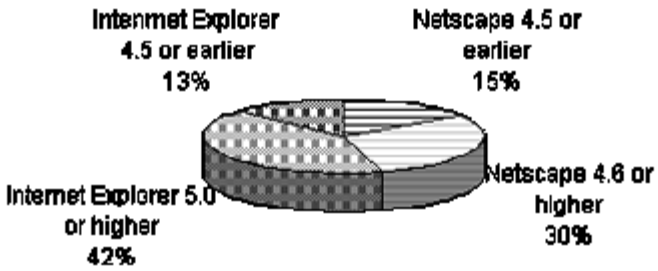
Table 19

Buildings with Information Accessible via the Internet in 2001	
Teacher/School Information	1309
Community Information	920
School Schedules	548
Homework Assignments	304
Report Cards / Attendance	44

Item 40 asks about the currency of the web browsers being used. Figure 20 shows the predominance of Internet Explorer, with version 5.4 being the most widely used.

Figure 20

Building Web Browsers



Data from the last three years indicate that 75-80% of principals and teachers, 35-40% of support staff, and 5% of students use the Department web site.

Missouri Department of Elementary and Secondary Education
"Making a positive difference through education and service"

Email: Education Technology
Phone: 573-751-8247 Fax: 573-522-1134
Last Revised: October 22, 2008

The 2001 Missouri School District Computing Census

Back to 2001 Census

D. Kent King
Commissioner of Education

Missouri Department of Elementary and Secondary Education
P.O. Box 480
Jefferson City, MO 65102-0480
http://www.dese.mo.gov/

N = 524

DISTRICT Level Census

Please complete this census form to reflect building status as of **March 1**.
It is recommended that you make a copy of the completed census for your files.
If you have questions, please call (573) 751-8247 or e-mail: instrtech@mail.dese.mo.gov

Contact Name:	Contact Title:
District Telephone #:	District Fax #:
Contact E-mail:	District URL:

TECHNOLOGY PLANNING

1.) Does your DISTRICT have a technology plan? 522 (97.7%) yes _2_ no (If no, skip to #2)
If yes,

A. Does your DISTRICT technology plan cover the following? (Check ALL that apply)

99% Hardware/Peripherals
92% School Computer Software
92% Internal Connections
96% Review Requirement
99% Staff Training
82% Curriculum Integration
95% Maintenance of Equipment
87% External Connections
59% Capacity of the School's Electrical Wiring

B. Is your DISTRICT technology plan for: _2%__1 year __63%_2 –4 years _35%_5 or more years.
Year plan last revised _2000_ State approved? 504 (96%) yes _20_no

2.) Who was involved in the DISTRICT decision-making related to technology acquisition and use? (Check ALL that apply)

96% Technology Team
88% Instructional Technology Director
31% Mgmt. Information Systems Director
91% Library Media Specialist
78% School Board Members
74% Chief Financial Officer
38% Curriculum Director
72% Superintendent
90% Principal
97% Teachers
57% Parents
74% Business Partners
34% Consultants
11% Other: _Students_

3.) Is technology a component in the district Comprehensive School Improvement Plan (CSIP)?

513 (98%) yes 11 no

4.) Does your DISTRICT "partner" with a business or higher education institution to support technology?
165 (31%) yes 69% no
If yes, who? 95-College/University 40-Technology-related business 20-Other business/industr

TECHNOLOGY TRAINING

5.) Who is responsible for technical maintenance and/or support of hardware in your district? (Check ALL that apply)

4% Parents/community members	83% District staff	27% School classified staff
27% Contractors agreement	6% Regional centers/RPDC's	78% Outside vendors
61% School certified staff	21% Students	___No One

6.) If you were to receive technical assistance for educational technology, what would your training priorities for the person(s) in # 5 be? (1=high 2=medium 3=low)

1=45% 2=41% 3=15% Technology Planning	1=46% 2=37% 3=17% ___ Networking
1=78% 2=19% 3=4% Curriculum Integration	1=30% 2=42% 3=28% ___Basic Operations
1=33% 2=57% 3=11% Information Systems	1=25% 2=47% 3=28% __ Procurement
1=78% 2=18% 3=5% Instructional Integration	1=22% 2=50% 3=28% Budget Planning
1=20% 2=55% 3=25% __Community Awareness	

7.) Are your teachers required to demonstrate technology skills for employment or continued employment with your DISTRICT? 50 (10%) yes 90% no
If yes, how are they evaluated? (Check ALL that apply)
15 Transcripts 27 Hands-on Evaluation 34 Professional Development Hours
Other: 8—Employment interviews 12—Evaluation/observation

8.) Please estimate the percentage of Administrators in your administrative building/district office(s) at each level in the use of technology.

	Beginner %	Intermediate %	Advanced %
Administrators	16%	65%	18%

HARDWARE & SUPPORT

9.) Please estimate the total number of FTE responsible for technical maintenance and support of hardware?
900 total (1.72 average) District-Level staff 668 total (1.28 average) School-Level staff

10.) Please identify the number of computers, by type, that are currently in use in your administrative building/administrative office(s):

PC Compatible	Number of Computers	Apple/Mac	Number of Computers
386 or earlier	79	Apple II/IIe/GS	134
486	879	MAC 68000	86
PENTIUM		Mac 20/30	118
---(586)	2077	Mac 40	104
---MMX	2507	iMac	333
---II	6624	G3/G4	173
---Pro/(686)	2281	Mac Power PC	598
PC Laptop	1199	Mac Powerbook/iBook	331
PC Sub-total	**15,646**	**Apple/Mac Sub-**	**1,877**

		total	

TOTAL = 17,523

11.) How many of these personal computers are running:

PC Compatible	Number of Computers	Apple/Mac	Number of Computers
Windows 3.1	448	OS 7.5	422
Windows 95	5647	OS 7.6	3102
Windows 98	8615	OS 7.8	53
Windows 2000/Me	588	OS 8.0/8.1	176
Windows NT 3.x	21	OS 8.5/8.6	248
Windows NT 4.x	336	OS 9 or later	385
Novell 3.x	371		
Novell 4.x	1014		
Novell 5.x	2638		
Unix/Linux	24		
PC Sub-total	**19,702**	**Apple/Mac Sub-total**	**4,386**

TOTAL = 24,088

12.) Regarding your technology plan, how many computers will be purchased for the administrative building/administrative office(s)?

PC This school year?_1250_ Next year?_1192_ Future years?__2070__

Mac This school year?_ 110_ Next year?__ 183_ Future years?___154__

13.) Please estimate how many of the following your district plans to purchase FOR YOUR SCHOOL BUILDINGS in the next 2 years.

Interactive Whiteboards_1340__ Interactive Whiteboard Projectors_1367__

Computers_43,667 Computer Upgrades_13,868

INTERNET CONNECTIVITY/DISTANCE LEARNING

14.) Do the administrative building/administrative office(s) have a direct link to the Internet (i.e., dedicated Connection – NOT a Dial-up)? _503 (96%)_ yes _4%__no

If yes, what is the bandwidth capacity?

463 T1 38 56Kbps _5 384Kpbs _6 10Mb _7 Cable Modem _8_ Other: OC3, DSL, Fiber, Wireless, Radio

15.) Do the administrative building/administrative office(s) have a local area network (LAN)? _503 (90%)_yes 10%__no

If yes,

A. How many total computers are connected to the LAN? _36,612_____

B. How many of the above computers are servers? __ 1,044 (3%)_____

C. What operating system does your server(s) use? (Check ALL that apply and indicate how many.)

46 Linux 1,235 Windows NT 331 Apple Share 3,060 Novell 174 Other

16.) Are your administrative building/administrative office(s) and school buildings connected to each other by a Wide Area Network (WAN)? _297 (57%) yes 227 (44%)_ no

If yes,

A. How many school buildings are currently connected? __2,217_(94%)___

B. How many school buildings remain to be connected? ___141 _____

17.) Does your administrative building/administrative office(s) have at least one office equipped for two-way interactive audio/video communications with other locations? _42 (8%)_ yes _482 (92%)_ no

A. If yes, check ALL that apply

_28_ Full motion video capability _15_ Compressed video capability

B. If yes, how many of the following video links are there in your district buildings?

_50_ One-way video with two-way audio or PC link _69_ Two-way video and audio

18.) Does your district require parents' signature before students can access the Internet?

(Indicate yes with a check) 418 (80%) Elementary _458 (87%) MS/Jr. High

_407 (78%) High School

TECHNOLOGY USAGE

19.) Has your district incorporated technology into your curriculum guides and academic standards?

_463 (88%)_ yes _61 (12%)_ no

If yes, in what percentage of your core content areas? __65%_

20.) Does your district have technology proficiency requirements for your students to pass to the next level?

99 (19%) yes _81%_ no

21.) What DISTRICT information can be accessed from an outside location via the Internet? (Check ALL that apply)

_69%_ District calendar _58%_ School Board members _17%_ School Board agenda and minutes

_65%_ District staff _28%_ District newsletter _18%_ District curriculum

_35%_ Student work _52%_ Annual report of school district data

Other: Lunch menus, activities, sporting events, general information, newsletters

22.) Please estimate the total staff FTE responsible for the training and the support of teachers in integrating the use of technology into curriculum and instruction.

District-Level staff # 804 total (1.53 average) School-Level staff # 1021 total (1.95 average)

23.) Please indicate the total number of e-mail accounts provided by the district for each user group.

User Group	Number of e-mail Accounts
Students	42,662
Teachers	61,370
Administrators	8,155

24.) Please estimate the percent of the district's 6th graders who are computer literate (able to perform basic computer operations)? _83.7%

25.) Does the district have its own e-mail server or does it plan to install one? 385 (73%) yes 139 (27%) no

If yes, what e-mail software do (or will) you use? 101—Mercury, 89—Pegasus, 5—Eudora, 47—MS Exchange/Explorer, 41—Groupwise

26.) Does your district have its own web server or does it plan to install one? _339 (65%)_ yes _195 (35%)_ no

If yes, what web software do (or will) you use? _95—MS FrontPage and IIS, 63—Novell, 31—Apache_

27.) Does the district have it own proxy server or plan to install one? _227 (43%)_ yes _299 (57%)_ no

If yes, what proxy software do (or will) you use? __(predominantly Border Manager)_

28.) Does the district have its own firewall or plan to install one? _299 (57%)__ yes _225 (43%)__no
If yes, what firewall software do (or will) you use? _118—Border Manager, 19—Sonic Wall, 15—Linux, 8—Screen Door

TECHNOLOGY FUNDING

29.) Amount for which items were purchased or budgeted: (please round to the nearest $100)

Items Purchased or Budgeted	Last Fiscal Year	Current Fiscal Year	Next Fiscal Year
Computer and peripheral hardware (modems, printers, CD-ROMs)	$42,050,485 (30,000)	$43,835,991 (31,500)	$39,206,409 (21,000)
Instructional software for classroom use	$5,809,475 (4,000)	$6,481,647 (4,500)	$6,193,943 (3,000)
Professional development for educational technology	$4,229,137 (2,800)	$4,379,409 (3,000)	$4,533,669 (3,000)
Internet charges	$1,575,164 (1,500)	$1,509,878 (1,500)	$1,514,324 (1,500)
Distance learning (cable TV, satellite, etc.)	$1,987,733 (100)	$2,481,296 (450)	$2,377,102 (400)
Server and/or support	$7,839,798 (2,000)	$8,740,757 (3,000)	$9,180,776 (2,500)
Remaining/other	$342,104 (0)	$1,586,870 (0)	$1,466,997 (0)
TOTAL	**$ 63,833,896**	**$ 69,015,848**	**$ 64,473,220**

30.) Did your district apply for the E-rate discount for the current 12-month period of July 1 - June 30?
_368 (70%)_yes _30%_no
If yes, what is the estimated value of your discount? State: $ 11,095,777 Median Value: $ 10,000

31.) Has your district purchased technology products/services off the Missouri Prime Vendor Contract?
59 (11%) yes _89%_no
If yes, in what percentage of you core content areas? 20%

Missouri Department of Elementary and Secondary Education
"Making a positive difference through education and service"

Email: Education Technology
Phone: 573-751-8247 Fax: 573-522-1134
Last Revised: August 6, 2008

The 2001 Missouri School District Computing Census

Back to 2001 Census

D. Kent King
Commissioner of Education

Missouri Department of Elementary and Secondary Education
P.O. Box 480
Jefferson City, Missouri 65102-0480
http://www.dese.mo.gov/

N = 2253

Missouri Census of Technology	**SCHOOL Building Census Form**

Please complete this census form to reflect building status as of **March 1**.
It is recommended that you make a copy of the completed census for your files.
If you have questions, please call (573) 751-8247 or e-mail: instrtech@dese.mail.mo.gov

Contact Name:	Contact Title:
School Telephone #:	School Fax #:
Contact E-mail:	School URL:

TECHNOLOGY PLANNING

1.) Does your school building have a technology plan? _1879 (84%) yes _374 (17%) no (If no, skip to #2)
If yes,
A. Is the school plan part of the district plan? _ 1929 (86%) yes _324 (14%) no

B. Does your School building technology plan cover the following? (Check ALL that apply)
83% Hardware/Peripherals 81% School Computer Software 73% Internal Connections
65% Review Requirement 82% Staff Training 78% Curriculum Integration
73% Maintenance of Equipment 48% External Connections 47% Capacity of the School's Electrical Wiring
8% Assistive technology devices and services

C. Is your district technology plan for: 3% 1 year 52% 2–4 years 34% 5 or more years.
Year plan last revised 2000 (over 50%)

2.) Who was involved in developing, implementing and evaluating the school building technology plan? (Check ALL that apply)
81% Technology Team 85% Principal 85% Teachers
51% Instructional Technology Contact 32% Business Representatives 61% Parents

73% Library Media Specialist 25% Curriculum Staff / Consultant
Other: 5% Students, 1% District Administration

3.) Does your school building have a Comprehensive School Improvement Plan (CSIP)? 1914 (85%) yes 339 (15%) no
If yes, is technology a component? 75% yes 25% no

4.) Does your school "partner" with a business or higher education institution to support technology? 659 (29%) yes 71% no
If yes, who? 418 Colleges/Universities, 190 Technology-related business, 136 Other business/industry, 42 Public entities

TECHNOLOGY TRAINING

5.) Who is responsible for technical training and/or support of staff in your school building? (Check ALL that apply)
91% District Staff 33% School Classified Staff 68% School Certificated Staff
48% Outside Vendor(s) 16% Contractors Agreement 19% Regional Centers/RPDC's
7% Students 4% Parents/Community Members 1% No One

6.) Please estimate the number of staff FTE responsible for technical training and support needs of you school building's staff.
District-level staff 7337 total (3.25 average) Building-level staff 1818 total (.8 average)

7.) Please rank your educational technology training priorities for this school building's faculty. (1=high 2=medium 3=low)
1=53% 2=32% 3=15% Basic Computer Operations 1=19% 2=45% 3=36% Hypermedia Operations
1=41% 2=48% 3=12% Evaluating INTERNET Information 1=45% 2=41% 3=14% Word Processing
1=22% 2=43% 3=37% LAN Applications/Resources 1=68% 2=27% 3=5% Instructional Delivery w/Instr. Tech.
1=18% 2=50% 3=32% Database Applications 1=47% 2=45% 3=8% INTERNET Applications
1=60% 2=35% 3=5% Curriculum Develop. w/Education Tech. 1=13% 2=45% 3=42% Assistive technology training
Other: E-mail operations, multimedia

8.) Please rank the professional development needs of the school building's technical support staff? (1=high 2=medium 3=low)
1=43% 2=42% 3=15% Technology Planning 1=33% 2=34% 3=35% Network/Wiring
1=27% 2=42% 3=31% Procurement 1=70% 2=26% 3=4% Curriculum Integration
1=25% 2=44% 3=31% Budget Planning 1=20% 2=52% 3=28% Database Management
1=34% 2=48% 3=18% Community Awareness/PR 1=36% 2=43% 3=21% LAN applications
1=20% 2=41% 3=40% Distance Learning

9.) How many hours per school year does your school building offer or schedule professional development to upgrade technology and computer skills in the following areas?

Training	Administrators	Teachers
Introductions to operations	4.08 Hours	6.48 Hours
Using software applications	10.6 5 Hours	15.76 Hours
Using Internet Resources	5.74 Hours	9.75 Hours

Curriculum Integration	5.07 Hours	9.52 Hours
Teaching Applications	3.96 Hours	8.34 Hours
Using Assistive Technology Devices	.24 Hours	.62 Hours

10.) Are your teachers required to demonstrate technology skills for employment or continued employment with your school?

_379 (17%)_ yes _1874 (83%)__ no

If yes, how are they evaluated? (Check ALL that apply)

82 Transcripts 119 Hands-on Evaluation 129 Professional Development Hours

Other: 30—Interviews, 23—Observations, 22—Assessments, 18—Regular Evaluation/PBTE

11.) Please estimate the percentage of principal(s), teachers, and technological support staff in your school building in each skill level in terms of their use of technology.

Faculty/Staff	Beginner %	Intermediate %	Advanced %
Principal(s)	18%	64%	18%
Teachers	28%	54%	18%
Technology Support Staff	4%	31%	66%

12.) During the current school year, how many days has your school scheduled for professional development activities where teachers can learn/upgrade their technology and computer skills? 6304 total (average 2.8)

13.) Compared to the last school year, do you think the number of scheduled professional days for technical training will:

_41 (2%) Decrease _922 (53%) Remain the same 774 (45%) Increase

HARDWARE & SUPPORT

14.) Who is responsible for technical maintenance and/or support of hardware in your school building? (Check ALL that apply)

_91%__ District Staff _31%__ School Classified Staff 54% School Certificated Staff

3% Parents/Community Members _62%__ Outside Vendors _3%__ Regional Centers/RPDC's

_11%__ Students 25% Contractors 0%_ No one

15.) Please estimate the number of staff FTE responsible for technical maintenance and support of hardware in your school building. _3992 total (average 1.78)

16.) Please identify the number of computers by type that are currently in use in the following locations within your school building:

Apple/Mac	Computer Labs	Instructional Rooms	Library/Media Center	Principal Office(s)	Other Locations	Total
Apple II/IIe/GS	1156	6558	285	14	296	8309

MAC						
---68000series or earlier	874	3708	216	51	254	5103
---68020 and 68030 series	1639	3313	335	72	300	5659
---68040 series	2212	5177	457	212	402	8460
EMATES	93	146	85	6	22	352
Power Mac	8629	8975	1170	347	644	14765
Mac Powerbook/iBook	345	1327	286	163	315	2436
IMac	6092	4966	806	213	231	12308
G3/G4	592	816	217	53	130	1807
Apple/Mac Sub-total						**59199**

PC Compatible	**Computer Labs**	**Instructional Rooms**	**Library / Media Center**	**Principal Office(s)**	**Other Locations**	**Total**
386 or earlier	1680	3099	486	98	547	5910
486	5463	10147	1498	658	1190	15956
PENTIUM						
---(586)	9819	14720	2627	1438	1750	30354
---MMX	9733	13861	2488	1013	1608	28703
---II	20486	26721	4947	3049	3054	58257
---III	8653	11938	1702	1141	1239	24673
---Pro (686)	2697	2207	482	297	514	6197
PC Laptop	894	1771	594	538	1069	4866

PC Sub-Total						**177916**

TOTAL = 237,115

17.) How many of these personal computers in your school building are running the following:

PC	Number of Computers	Mac	Number of Computers
Windows	158,053	OS	61,077
Windows 3.1	8630	OS 7.5	11585
Windows 95	78322	OS 7.6	22750
Windows 98	64969	OS 7.8	7285
Windows 2000/Me	3770	OS 8.0/8.1	3419
Windows NT 3.x	119	OS 8.5/8.6	5669
Windows NT 4.x	2243	OS 9 or later	10369
Novell	30,995		
Novell 3.x	1537		
Novell 4.x	8302		
Novell 5.x	21156		
Unix/Linux	127		

18.) Please indicate the number of computers in your school building that are multimedia equipped:
Mac_36,436 (20%)_ PC_144,922 (80%)_

19.) Regarding your technology plan, how many computers will be purchased for your school building during:

A. PC This school year?_1250_ Next year?_1192__ Future years?_2070__

B. Mac This school year?__110_ Next year?__183__ Future years?__154__

20.) Please indicate the number of ROOMS in the following locations, within your school building:

Number of ...	Computer Labs	Instructional Rooms	Library/ Media Center	Principal Office(s)	Other	TOTAL

a. Rooms total	3301	55905	2201	4877	7380	73664
b. Rooms with telephone access	2389	33692	1941	4580	6424	49026
c. Rooms wired for the Internet	3064	47059	2023	4220	5685	62051
d. Rooms with one or more multimedia equipped computers	2997	42065	1906	3940	5197	56105
e. Rooms with one or more multimedia equipped computers with direct connection to the Internet	2351	29826	1463	2703	3580	39923
f. Rooms with one or more multimedia equipped computers with direct connection to the Internet and a dedicated printer and a dedicated projection device	820	5826	302	187	417	7606

21.) Please indicate the number of computers in the following location, within your school building.

Number of ...	Computer Labs	Instructional Rooms	Library / Media Center	Principal Office(s)	Other	TOTAL
COMPUTERS connected to the Internet	63245	86464	14183	7312	8305	179509
COMPUTERS multimedia equipped	59049	81386	15963	6614	7795	170807

22.) Please report the number of units/systems in your school building.

A. CD-ROM Network	35573	I Computer Projection Devices	7773	Q. Probeware	1405
B. Laserdisc Players/DVD	5680	J. Dot Matrix Printers	12404	R. Fax machines	2361
C. VCR Units	37701	K. Inkjet Printers	43326	S. Alpha Smart/Laptop Processors	6311
D. TV Monitors	41683	L. Laser Printers	12288	T. Interactive Television	689

E. Scanners/Digitizers	5133	M. Total Color Printers	34293	U. Interactive Whiteboards	1027
F. Digital Cameras	3940	N. Graphic Calculators	27279	V. Satellite Receiver	454
G. Assistive/Adaptive Devices	2978	O. Scientific Calculators	24385	W. Cable TV	13991
H. Personal Digital Assistants	250	P. Video Dist. Systems	311		

INTERNET CONNECTIVITY/DISTANCE LEARNING

23.) Does your school building have access to the Internet? _1773 (79%)_ yes _481 (21%)_ no
If yes, who is your Internet provider? _1674 (94%) MOREnet
_77_ (4%) Other: 9—Southwestern Bell, 5—Charter Communications, 4—Sho-Me Technologies_

24.) Does the school building have a direct link (dedicated connection) to the Internet?
1303 (73%)_ yes 470 (27%)_ no
If yes, what is the bandwidth capacity?
155 56-256kb 82 10-45mb 82 384-768kb 18 OC1 or greater 1390 T1 (1.5-6mb)
_14 Don't know Other: 3—Cable Modem

25.) Does the school building have dial-up links? _204 (9%) yes _2049 (91%) no
If yes, how many modems, by speed, are in this school building?
_13_ 14.4K _25_ 28.8K _22_ 33.6K _706_ 56K

If yes, who uses the dial-up access? Administrators_140__ Teachers_133__ Other staff_116__
Students 37__ Other : _8—Community, 5—Board Members

26.) How many dial-up computer lines are available in the school building? _878 total lines (1.68 average per school)

27.) If the school building uses dial-up links, where are you dialing to? (Check ALL that apply)
_130_District _74_MOREnet _60_Commercial

28.) Does your school currently have a local area network (LAN)? _1619 (72%)_ yes _631 (28%)_ no
If yes,

A. How many computers are connected to the LAN in your school building? _ 153,665 total (68.21 average per school)
B. Of the above computers, how many are servers? _ 2602 total (1.16 average per school)
C. What operating system does your server(s) use? (Indicate how many.)
Linux (how many) _ 107_ Windows NT (how many) _3879
Apple Share (how many) 721__ Novell (how many) 10,052__
Other (Please Specify)_ Unix_ (how many) _12_
D. What services are run on the servers?
_775_Email _311_FTP _351_Proxy Server _675 Web 163 Telnet 358 Firewall
E. If email is offered, please specify Email software program. _ 203—Pegasus, 165—Groupwise, 155—Mercury, 60—Eudora, 116—IE Exchange/Outlook

29.) Is your school building connected to another school building in your district through a Wide Area Network (WAN)
1332 (59%) yes 514 (23%) no 407 (18%) NA

30.) Do any of the students in your school building use any of the following to participate in classes originating from remote sites? (Check ALL that apply)

158 Satellite 135 Desktop Technologies/IP/MOREnet 209 Interactive TV (Video Classroom)
262 Cable TV 15 Compressed Video Other: 5—Videotape, 2—Web/Online

31.) If you do not now have any distance learning programs, do you plan on any in the next two years?
319 (14%) yes (86%) no
If yes, please indicate type 132—IP-based, 54—I-TV, 26—electronic field trips, 8—compressed video, 7—dual credit/AP

32.) Do you require parents' signatures before students can access the Internet? 1254 (56%) yes 999 (44%) no

33.) What proportion of students, in your school building have signed Internet Acceptable Use Policies? 59%

34.) Does your school building currently use filtering software on your Internet-connected computers?
1005 (45%) yes 55% no
If yes, A. On what percentage of your Internet connected computers? 100 %
B. What products (for instance, Cyber Patrol, Net Nanny, Surf Watch)? 414—Cyber Patrol, 136—Screen Door, 103—Web Sense, 95—X-Stop, 82—Sonic Wall, 71—SurfWatch, 69—Border Manager, N2H2—46

TECHNOLOGY USAGE

35.) Estimate the percentage of administrators, teachers, and students in your school building who routinely use the following applications.

Applications	Principal(s) (%)	Teachers (%)	Students (%)
A. Educational Software	34%	59%	62%
B. E-Mail	74%	65%	11%
C. Web-Browsing (Net Surfing)	71%	67%	52%
D. EBSCO host or other educational database	24%	27%	22%
E. Electronic Encyclopedia	22%	36%	38%

36.) Estimate the percentage of administrators, teachers, and students in your school building who routinely use the computer for the following functions.

Functions	Principal(s) (%)	Teachers (%)	Students (%)
A. Computer-generated Presentations	31%	29%	23%

B. Writing Assignments	56%	60%	52%
C. Research Information Collection	58%	56%	49%
D. Communicate with Parents	48%	39%	7%
E. Lesson Plan Preparation	13%	45%	N/A
F. Spreadsheet/Database (student records)	60%	46%	N/A
G. Track Student Performance	56%	48%	N/A
H. Communicate with DESE staff	52%	18%	N/A
I. Instructional Delivery and Presentations	21%	29%	N/A

37.) Who is responsible for the leadership and support of teachers in your school building in integrating technology into the curriculum?

65% Technology Coordinator 57% School Administrator 9% RPDC 8% Outside Vendor
37% Library/Media specialist Other: Teachers, professional development staff/committee, staff

38.) Estimate the percentage of the school building's teaching staff who are able to fully integrate technology into the curriculum? 33%

39.) What school information can be accessed from an outside location via the Internet? (Check ALL that apply)

548 Schedules 304 Homework Assignments/Help 44 Report Cards/Attendance
920 Community Info. 1309 Teacher/School Info.
Other: lunch menus, curriculum, news bulletins

40.) What percentage of Internet-connected computers in your school building use a web browser at least as current as:

14 % Netscape 4.5 or earlier 28 % Netscape 4.6 or Higher 38 % Internet Explorer 5.0 or higher
12 % Internet Explorer 4.5 or earlier Other: (assortment)

41.) Who uses the DESE web site? (http://www.dese.mo.gov/)

1670 Principal(s) 1391 Teachers 835 Support Staff 75 Students 0 Other

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